

Claims

1. A service providing server for executing service providing processing in response to a service providing request from an information processing apparatus,
5 characterized by having:
 - a data reception section which receives a service request accompanied by an information recording medium ID and a service ID, from the information processing apparatus;
 - 10 a storage section which stores service providing situation data for each of the information recording medium IDs as service management data for each of title-unique values corresponding to titles of content stored on information recording media; and
 - 15 a data processing section which executes processing of verifying the information recording medium ID received via the data reception section, acquires a title-unique value on the basis of the information recording medium ID on condition that the information recording medium ID is
 - 20 validated, acquires service providing situation data corresponding to the title-unique value from the storage section to judge whether or not a service specified by the information recording medium ID and the service ID is providable, and executes the service providing processing
 - 25 on condition that the service is judged to be providable.
2. The service providing server according to Claim 1, characterized in that:
 - the data processing section is configured to execute the processing of verifying the information recording medium ID as processing of verifying signature data contained in the information recording medium ID,

and execute the processing of acquiring, from the storage section, the service providing situation data corresponding to the title-unique value, according to the title-unique value contained in the information recording medium ID, or the title-unique value calculated by executing a calculation based on data contained in the information recording medium ID.

3. The service providing server according to Claim 1, characterized in that:

10 the service providing server has the storage section which stores a revocation list being a list of unauthorized information recording medium IDs; and

15 the processing of verifying the information recording medium ID in the data processing section is executed as processing of comparing the information recording medium ID received from the information processing apparatus with the IDs recorded in the revocation list.

4. The service providing server according to Claim 1, characterized in that:

20 the information recording medium ID is configured to include a title-unique value corresponding to a title of content stored in an information recording medium, and signature data generated on the basis of a secret key of a management apparatus and differing for each of the information recording media; and

25 the data processing section is configured to execute the processing of verifying the information recording medium ID as processing of generating a message to which a public key of the management apparatus is applied, for comparison with the signature data contained

in the information recording medium ID, and also execute the processing of acquiring the service providing situation data corresponding to the title-unique value contained in the information recording medium ID, from
5 the storage section.

5. The service providing server according to Claim 1, characterized in that:

the information recording medium ID includes:
a prime $p(w)$ set in response to each of a
10 number W of information recording media manufactured; and
data $IDKey(w)$ calculated by a calculation based on the prime $p(w)$ and the title-unique value; and
the data processing section is configured to execute processing of judging whether or not data
15 contained in the information recording medium ID is the prime, as the ID verifying processing, and also calculate the title-unique value from the data $IDKey(w)$ contained in the information recording medium ID, and acquiring the service providing situation data corresponding to the
20 title-unique value calculated, from the storage section.

6. An information processing apparatus for executing a service providing request to a service providing server, characterized by having:

a recording medium interface which executes processing of accessing an information recording medium;
25 and

a data processing section which executes processing of verifying an information recording medium ID read from the information recording medium via the recording medium
30 interface, and executes processing of transmitting the information recording medium ID to the service providing

server on condition that the information recording medium ID is validated.

7. The information processing apparatus according to Claim 6, characterized in that:

5 the data processing section is configured to execute the processing of verifying the information recording medium ID as processing of verifying signature data contained in the information recording medium ID.

8. The information processing apparatus according to 10 Claim 6, characterized in that:

the processing of verifying the information recording medium ID in the data processing section is configured as processing of acquiring a revocation list being a list of unauthorized information recording medium 15 IDs from a storage section or the information recording medium, and comparing the information recording medium ID received from the information processing apparatus with the IDs recorded in the revocation list acquired.

9. The information processing apparatus according to 20 Claim 6, characterized in that:

the information recording medium ID includes a title-unique value corresponding to a title of content stored on the information recording medium, and signature data generated on the basis of a secret key of a 25 management apparatus and differing for each of the information recording media; and

the data processing section is configured to execute the processing of verifying the information recording medium ID as processing of generating a message 30 to which a public key of the management apparatus is applied, for comparison with the signature data contained

in the information recording medium ID.

10. The information processing apparatus according to
Claim 6, characterized in that:

the information recording medium ID includes:

5 a prime $p(w)$ set in response to each of a
number W of information recording media manufactured; and
 data $IDKey(w)$ calculated by a calculation
based on the prime $p(w)$ and a title-unique value; and
 the data processing section is configured to
10 execute processing of judging whether or not data
contained in the information recording medium ID is the
prime, as the ID verifying processing.

11. A data processing method for executing service
providing processing in response to a service providing
15 request from an information processing apparatus,
characterized by having:

a data reception step of receiving a service
request accompanied by an information recording medium ID
and a service ID, from the information processing
20 apparatus; and

a data processing step of executing processing of
verifying the information recording medium ID received,
acquiring a title-unique value on the basis of the
information recording medium ID on condition that the
25 information recording medium ID is validated, acquiring
service providing situation data corresponding to the
title-unique value acquired, from a storage section
storing service providing situation data for each of the
information recording medium IDs as service management
30 data for each of title-unique values corresponding to
titles of content stored on information recording media,

judging whether or not a service specified by the information recording medium ID and the service ID is providable, and executing the service providing processing on condition that the service is judged to be 5 providable.

12. The data processing method according to Claim 11, characterized in that:

the data processing step is configured to include a step of executing the processing of verifying the 10 information recording medium ID as processing of verifying signature data contained in the information recording medium ID, and executing processing of acquiring, from the storage section, the service providing situation data corresponding to the title-unique value, according to the title-unique value 15 contained in the information recording medium ID, or the title-unique value calculated by executing a calculation based on data contained in the information recording medium ID.

20 13. The data processing method according to Claim 11, characterized in that:

the processing of verifying the information recording medium ID in the data processing step is configured to include a step of executing it as 25 processing of comparing the information recording medium ID received from the information processing apparatus with IDs recorded in a revocation list being a list of unauthorized information recording medium IDs.

14. The data processing method according to Claim 11, 30 characterized in that:

the information recording medium ID is configured

to include a title-unique value corresponding to a title of content stored on the information recording medium, and signature data generated on the basis of a secret key of a management apparatus and differing for each of the
5 information recording media; and

the data processing step is configured to include a step of executing the processing of verifying the information recording medium ID as processing of generating a message to which a public key of the
10 management apparatus is applied, for comparison with the signature data contained in the information recording medium ID, and also executing the processing of acquiring the service providing situation data corresponding to the title-unique value contained in the information recording
15 medium ID, from the storage section.

15. The data processing method according to Claim 11, characterized in that:

the information recording medium ID includes:
a prime $p(w)$ set in response to each of a
20 number W of information recording media manufactured; and
data $IDKey(w)$ calculated by a calculation based on the prime $p(w)$ and the title-unique value; and
the data processing step is configured to include a step of executing processing of judging whether or not
25 data contained in the information recording medium ID is the prime as the ID verifying processing, and also calculating the title-unique value from the data $IDKey(w)$ contained in the information recording medium ID, and acquiring the service providing situation data
30 corresponding to the title-unique value calculated, from the storage section.

16. A data processing method for executing a service providing request to a service providing server, characterized by having:

5 a recording medium accessing step of executing processing of accessing an information recording medium via a recording medium interface; and

10 a data processing step of executing processing of verifying an information recording medium ID read from the information recording medium via the recording medium interface, and executing processing of transmitting the information recording medium ID to the service providing server on condition that the information recording medium ID is validated.

15 17. The data processing method according to Claim 16, characterized in that:

the data processing step is configured to execute the processing of verifying the information recording medium ID as processing of verifying signature data contained in the information recording medium ID.

20 18. The data processing method according to Claim 16, characterized in that:

25 the processing of verifying the information recording medium ID in the data processing step is configured to include a step of acquiring a revocation list being a list of unauthorized information recording medium IDs from a storage section or the information recording medium, and comparing the information recording medium ID received from the information processing apparatus with the IDs recorded in the revocation list acquired.

30 19. The data processing method according to Claim 16,

characterized in that:

the information recording medium ID is configured to include a title-unique value corresponding to a title of content stored on the information recording medium,
5 and signature data generated on the basis of a secret key of a management apparatus and differing for each of the information recording media; and

the data processing step is configured to include a step of executing the processing of verifying the
10 information recording medium ID as processing of generating a message to which a public key of the management apparatus is applied, for comparison with the signature data contained in the information recording medium ID.

15 20. The data processing method according to Claim 16, characterized in that:

the information recording medium ID includes:

a prime $p(w)$ set in response to each of a number W of information recording media manufactured; and

20 data $IDKey(w)$ calculated by a calculation based on the prime $p(w)$ and a title-unique value; and

the data processing step is configured to include a step of executing processing of judging whether or not data contained in the information recording medium ID is
25 the prime, as the ID verifying processing.

21. A computer program for executing processing in response to a service providing request from an information processing apparatus, characterized by having:

30 a data reception step of receiving a service request accompanied by an information recording medium ID

and a service ID, from the information processing apparatus; and

a data processing step of executing processing of verifying the information recording medium ID received,
5 acquiring a title-unique value on the basis of the information recording medium ID on condition that the information recording medium ID is validated, acquiring service providing situation data corresponding to the title-unique value from a storage section storing service
10 providing situation data for each of the information recording medium IDs as service management data for each of title-unique values corresponding to titles of content stored on information recording media, judging whether or not a service specified by the information recording
15 medium ID and the service ID is providable, and executing the service providing processing on condition that the service is judged to be provable.

22. A computer program for executing a service providing request to a service providing server,
20 characterized by having:

a recording medium accessing step of executing processing of accessing an information recording medium via a recording medium interface; and

a data processing step of executing processing of verifying an information recording medium ID read from the information recording medium via the recording medium interface, and executing processing of transmitting the information recording medium ID to the service providing server on condition that the information recording medium
30 ID is validated.